

High School Science Vertical Alignment Chart

(Suggested structure - edit as needed)

			Courses		
Strands	Earth/Environmental	Biology	Physical Science	Chemistry	Physics
Scientific Inquiry	All Standards	All Standards	All Standards	All Standards	All Standards
Organizational Hierarchy		*Bio.3.5 - Analyze how classification systems are developed based upon speciation.		* Chm.1.3 - Understand the physical and chemical properties of atoms based on their position in the Periodic Table	*Phy.1.1 - Analyze the motion of objects *Phy.1.2 - Analyze the systems of forces and their interaction with matter *Phy.3.1 - Explain charges and electrostatic systems
Energy		*Bio.2.1 - Analyze the interdependence of living organisms within their environments. *Bio.4.1 - Understand how biological molecules are essential to the survival of living organisms. *Bio.4.2 - Analyze the relationships between biochemical processes and energy use in the cell.	*PSc.2.3 - Understand the role of the nucleus in radiation and radioactivity *PSc.3.1 - Understand the types of energy, conservation of energy and energy transfer *PSc.3.2 - Understand the nature of waves *PSc.3.3 - Understand electricity and magnetism and their relationship	* Chm.1.2 - Understand that bonding in simple compounds in terms of bond type, strength and properties Chm.2.1 - Understand the relationship among pressure, temperature, volume and phase * Chm.2.2 - Analyze chemical reactions in terms of quantities, product formation and energy * Chm.3.1 - Understand the factors affecting rate of reaction and chemical equilibrium Chm.3.2 - Understand solutions and the solution process	*Phy.1.3 - Analyze the motion of objects based on principles of conservation of momentum, conservation of energy, and impulse *Phy.2.1 - Understand the concepts of work, energy, and power, as well as the relationship among them *Phy.2.2 - Analyze the behavior of waves *Phy.2.3 - Analyze the nature of moving charges and electric circuits *Phy.3.2 - Explain the concept of magnetism
Interactions	*EEn.1.1 - Explain the	*Bio.2.1 - Analyze the	*PSc.3.3 - Understand electricity	Chm.2.1 - Understand the	*Phy.2.1 - Understand the

	Earth's role as a body in space.	interdependence of living organisms within their environments. Bio.3.2 Understand how the environment and/or the interaction of alleles, influences the expression of genetic traits.	and magnetism and their relationship	relationship among pressure, temperature, volume and phase * Chm.2.2 - Analyze chemical reactions in terms of quantities, product formation and energy * Chm.3.1 - Understand the factors affecting rate of reaction and chemical equilibrium Chm.3.2 - Understand solutions and the solution process	concepts of work, energy, and power as well as the relationship among them *Phy.2.2 - Analyze the behavior of waves *Phy.2.3 - Analyze the nature of moving charges and electric circuits *Phy.3.1 - Explain charges and electrostatic systems *Phy.3.2 - Explain the concept of magnetism
Equilibrium		*Bio.1.2 Analyze the cell as a living system.	* PSc.2.2 - Understand chemical bonding and chemical interactions	* Chm.1.2 - Understand that bonding in simple compounds in terms of bond type, strength and properties * Chm.2.2 - Analyze chemical reactions in terms of quantities, product formation and energy * Chm.3.1 - Understand the factors affecting rate of reaction and chemical equilibrium	
Structures (Molecular)		*Bio.4.1 - Understand how biological molecules are essential to the survival of living organisms.	* PSc.2.1 - Understand types, properties and structure of matter * PSc.2.2 - Understand chemical bonding and chemical interactions	* Chm.1.1 - Analyze the structures of atoms and ions * Chm.1.2 - Understand that bonding in simple compounds in terms of bond type, strength and properties	
Matter			* PSc.2.1 - Understand types, properties and structure of matter * PSc.2.2 - Understand chemical bonding and chemical interactions	* Chm.1.1 - Analyze the structures of atoms and ions * Chm.1.2 - Understand that bonding in simple compounds in terms of bond type, strength and	*Phy.1.2 - Analyze systems of forces and their interactions with matter *Phy.3.1 - Explain charges and electrostatic systems

			*PSc.2.3 - Understand the role of the nucleus in radiation and radioactivity	properties * Chm.1.3 - Understand the physical and chemical properties of atoms based on their position in the Periodic Table Chm.3.2 - Understand solutions and the solution process	
Forces	EEn.2.1-Explain how process and forces affect the lithosphere.		* PSc 1.2 - Understand the relationship between forces and motion		*Phy.1.2 - Analyze systems of forces and their interactions with matter *Phy.3.1 - Explain charges and electrostatic systems *Phy.3.2 - Explain the concept of magnetism
Motion	*EEn.1.1 - Explain the Earth's role as a body in space.		* PSc 1.1 - Understand motion in terms of speed, velocity, acceleration and momentum * PSc 1.2 - Understand the relationship between forces and motion		*Phy.1.1 - Analyze the motion of objects *Phy.1.3 - Analyze the motion of objects based on the principles of conservation of momentum, conservation of energy, and impulse *Phy.2.2 - Analyze the behavior of waves *Phy.2.3 - Analyze the nature of moving charges and electric circuits
Structure and Function	*EEn.2.3 Explain the structures and processes within the hydrosphere. *EEn.2.5 Understand	*Bio.1.1 - Understand the relationship between the structures and functions of cells and their organelles. *Bio.3.1 - Explain how			*Phy.2.2 - Analyze the behavior of waves

	the structure and processes within our atmosphere.	traits are determined by the structure and function of DNA. *Bio.4.1 - Understand how biological molecules are essential to the survival of living organisms.			
Human Impact	<p>*EEn.2.2 Understand how human influences impact the lithosphere.</p> <p>*EEn.2.4 Evaluate how humans use water.</p> <p>*EEn.2.6 Analyze patterns of global climate change over time.</p> <p>*EEn.2.8 - Evaluate human behaviors in terms of how likely they are to ensure the ability to live sustainably on Earth.</p>	<p>*Bio.2.2 - Understand the impact of human activities on the environment (one generation affects the next).</p> <p>*Bio.3.3-Understand the application of DNA technology.</p>			
Change over Time	*EEn.2.6 - Analyze patterns of global climate change over time.	*Bio.3.4 - Explain the theory of evolution by natural selection as a mechanism for how species change over time.			